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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,762	01/30/2001	Tetsuya Makino	1100.65170	9437

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EXAMINER

WU, XIAO MIN

ART UNIT PAPER NUMBER

2674

DATE MAILED: 08/11/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Handwritten signature

Office Action Summary

Application No.

09/772,762

Applicant(s)

MAKINO ET AL.

Examiner

XIAO M. WU

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-8 and 10 is/are rejected.
- 7) ☒ Claim(s) 3 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2, 4-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani et al. (US Patent No. 6,392,620) in view of Miyazawa (US Patent No. 5,731,794).

As to claims 1 and 7, Mizutani discloses a liquid crystal display device comprising: an active matrix panel (Fig. 2), a liquid crystal having spontaneous polarization (col. 9, lines 44-45) sealed in the active matrix panel; a writing/erasing (e.g. display and non-display) unit (23, 22, Fig. 2) for displaying an image on a frame by frame basis by repeating a data writing process for the active matrix panel (see Fig. 3A, 3B), and a write/erasure controller (23, 22, Fig. 2) for controlling the writing unit to have a frequency in the data writing process at least twice higher than a frame frequency (e.g. as shown in Fig. 3A, the data (R,G,B) is written three time within a

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frame period) and to complete the data writing process and erasing process within one frame time (see Fig. 3A) so that time taken for transmission of light through the color display is not more than a half of one frame time (e.g. half of frame is for transmission of light as shown in Fig. 3A). It is noted that Mizutani discloses using a plurality of backlight source for providing a color LCD and does not discloses the active matrix panel having a coloring member (e.g. a color filter for each pixel). However, using a color filter in a LCD is well known in the art instead of using color light source such as taught by Miyazawa (see Fig. 11). It would have been obvious to one of ordinary skill in the art to have modified Mizutani with the features of the color filters as taught by Miyawawa so that the plurality of color backlight sources can be replaced by a single white light source, and thus the backlight control circuit can be simplified.

As to claims 2, 5, Mizutani discloses the that the writing/erasure controller controls the writing/erasing unit to perform the data writing process and the data erasing process by using an entire one frame time (see Fig. 3A).

As to claims 4-6, 10, Miyawawa discloses a back-light (112, Fig. 11) for irradiating white light one the coloring member (109, Fig. 11); and Mizutani as modified discloses a backlight controller (22) for controlling the back-light to be turn on or off according to the data writing process and the data erasing process (see Fig. 3A).

Allowable Subject Matter

4. Claims 3 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The US Patents 6,069,600, 6,115,016, 6,476,784, 6,570,554 and Pub. No. US 2002/0000960 are cited to teach a LCD with a backlight source control.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiao Wu whose telephone number is (703) 305-4721.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:


(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377

xw

August 7, 2003


XIAO WU
PRIMARY EXAMINER
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